Annual Meeting

2019

Sustainable development is a “must have”

- What does this mean for life science and health care?

Katherine Richardson
Professor of Biological Oceanography and Leader of
Sustainability Science Centre, University of Copenhagen

medicon valley alliance

Creating Opportunities

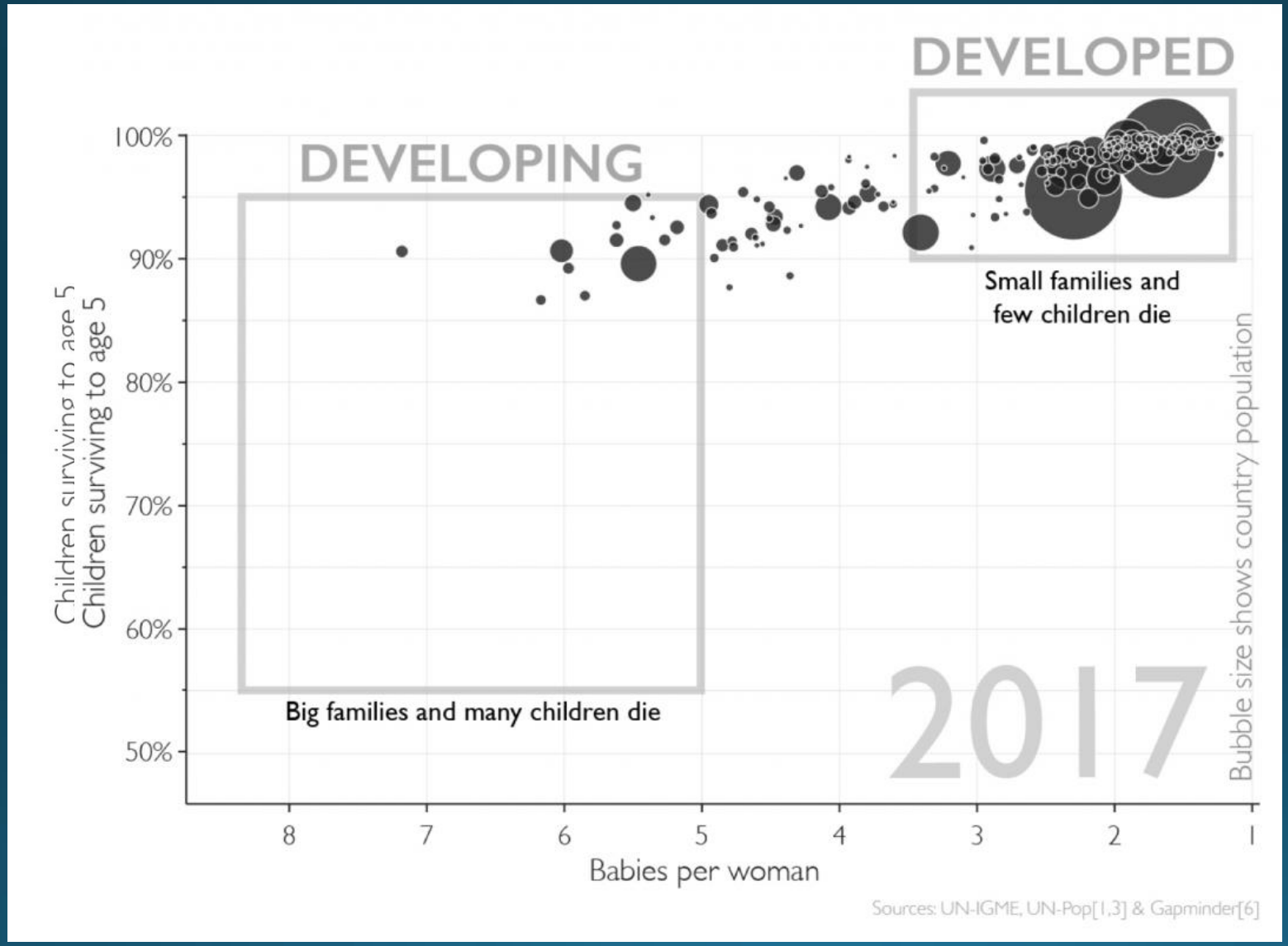
Sustainable Development is a “need to have”

Katherine Richardson, Professor

Leader, Sustainability Science Centre
Member, IGS authors of 2019 GSDR

KØBENHAVNS UNIVERSITET

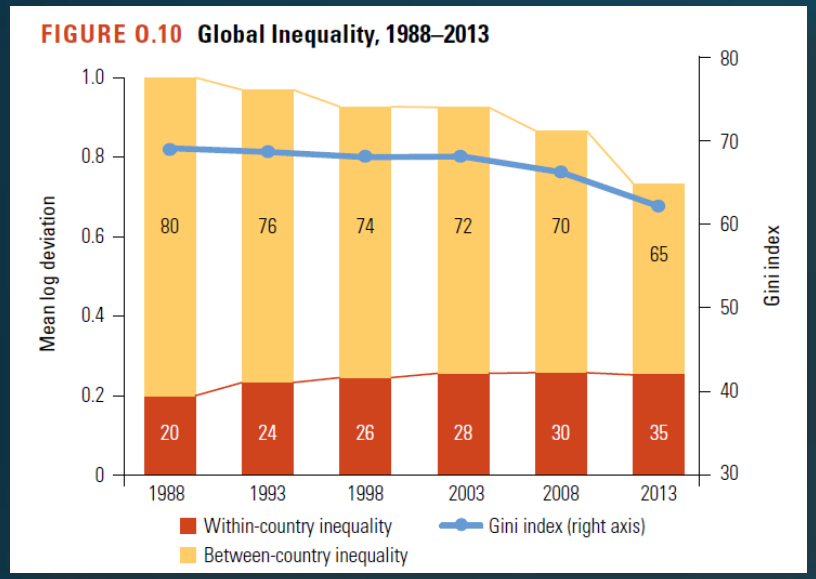
A Success Story



Rosling, 2018. Factfulness

That came with social and environmental externalities

Raising inequalities



World Bank, 2016

Biodiversity loss

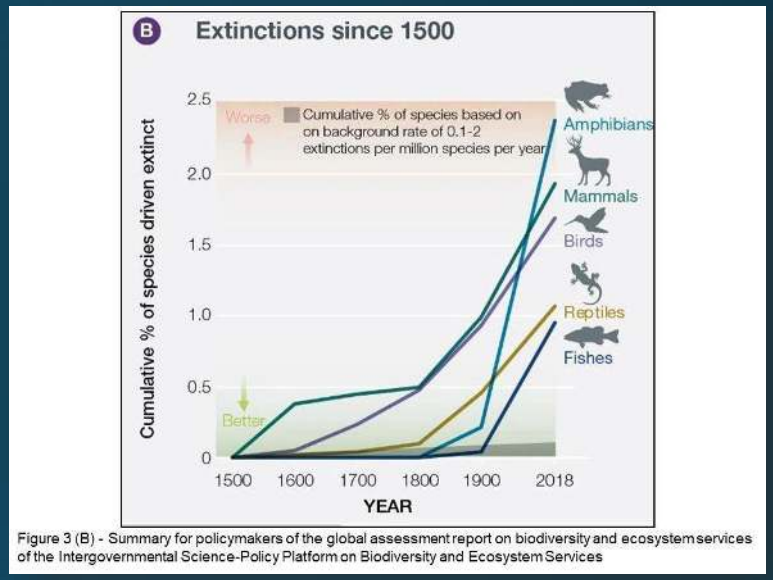
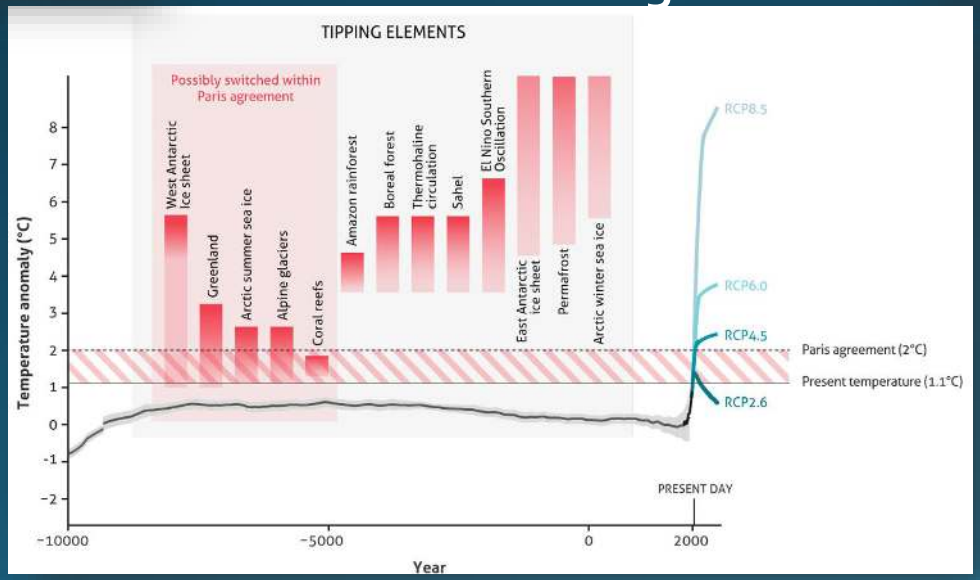


Figure 3 (B) - Summary for policymakers of the global assessment report on biodiversity and ecosystem services of the Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services

IPBES, 2019

Climate change



Future Earth, 2017, based on Schellnhuber et al. 2016

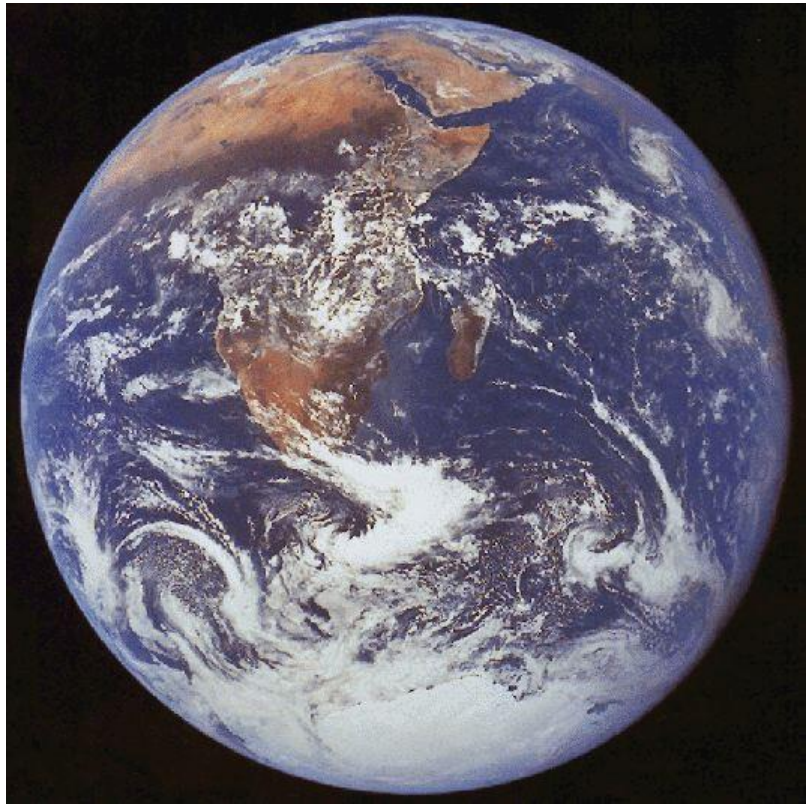
As well as winners…

	Country/Corporation	Revenue (USD bn)		Country/Corporation	Revenue (USD bn)		Country/Corporation	Revenue (USD bn)		Country/Corporation	Revenue (USD bn)
1	United States	3363	26	Mexico	224	51	General Electric (US)	140	76	Walgreens Boots Alliance (US	104
2	China	2465	27	Switzerland	216	52	CSCEC (CN)	139	77	HP (US)	103
3	Japan	1696	28	Berkshire Hathaway (US)	211	53	AmerisourceBergen (US)	136	78	Assicurazioni Generali (IT)	103
4	Germany	1507	29	India	200	54	Agricultural Bank of China	133	79	Cardinal Health (US)	103
5	France	1288	30	Norway	200	55	Verizon (US)	132	80	BMW (DE)	102
6	United Kingdom	996	31	McKesson (US)	192	56	Chevron (US)	131	81	Express Scripts Holding (US)	102
7	Italy	843	32	Russia	187	57	E.ON (DE)	130	82	Nissan Motor (JP)	102
8	Brazil	632	33	Austria	187	58	AXA (FR)	129	83	China Life Insurance (CN)	101
9	Canada	595	34	Turkey	184	59	Indonesia	129	84	J.P. Morgan Chase (US)	101
10	Walmart (US)	482	35	Samsung Electronics (KR)	177	60	Finland	128	85	Koch Industries (US)	100
11	Spain	461	36	Glencore (CH/JE)	170	61	Allianz (DE)	123	86	Gazprom (RU)	99
12	Australia	421	37	ICBC (CN)	167	62	Bank of China (CN)	122	87	China Railway Eng. (CN)	99
13	State Grid (CN)	330	38	Daimler (DE)	166	63	Honda Motor (JP)	121	88	Petrobras (BR)	97
14	Netherlands	323	39	UnitedHealth Group (US)	157	64	Cargill (US)	120	89	Schwarz Group (DE)	97
15	South Korea	304	40	Denmark	157	65	Japan Post Holdings (JP)	119	90	Trafigura Group (NL/SG)	97
16	China Nat. Petroleum (CN)	299	41	EXOR Group (IT/NL)	154	66	Costco (US)	116	91	Nippon Telegraph and Tel. (JI	96
17	Sinopec Group (CN)	294	42	CVS Health (US)	153	67	Argentina	116	92	Boeing (US)	96
18	Royal Dutch Shell (NL/GB)	272	43	General Motors (US)	152	68	BNP Paribas (FR)	112	93	Venezuela	96
19	Sweden	248	44	Vitol (NL/CH)	152	69	Fannie Mae (US)	111	94	China Railway Constr. (CN)	95
20	Exxon Mobil (US)	246	45	Ford Motor (US)	151	70	Ping An Insurance (CN)	110	95	Microsoft (US)	94
21	Volkswagen (DE)	237	46	China Constr. Bank (CN)	150	71	Kroger (US)	109	96	Bank of America Corp. (US)	93
22	Toyota Motor (JP)	237	47	Saudi Arabia	150	72	Société Générale (FR)	108	97	ENI (IT)	93
23	Apple (US)	234	48	AT&T (US)	147	73	Amazon.com (US)	107	98	Greece	93
24	Belgium	232	49	Total (FR)	143	74	China Mobile Comm. (CN	106	99	Nestlé (CH)	92
25	BP (GB)	226	50	Hon Hai Precision Ind. (TW)	141	75	SAIC Motor (CN)	105	100	Wells Fargo (US)	90

Nation states Multi-national company Fossil-fuel based industry

Based on Babic M, Fichtner J, Heemskerk EM. 2017. States versus Corporations: Rethinking the Power of Business in International Politics. The International Spectator. 52(4):20–43. doi:10.1080/03932729.2017.1389151.

… and losers



Climate/Sustainability Challenge:

To bring and maintain the human demand for Earth resources to within their supply!

Sustainable development is a ”need to have” not a ”nice to have” ….

SDGs are a vision for how we want to share the Earth's resources!

Relevant for all global citizens – not just for those in developing countries

September 11, 2019

https://sustainabledevelopment.un.org/content/documents/24797GSDR_report_2019.pdf

Few goals are on track to be met… and for several critical goals, the trends are in the wrong direction!

KØBENHAVNS UNIVERSITET

Business-as-usual approaches

GOAL	WITHIN 5%	5–10%	>10%	NEGATIVE LONG-TERM TREND
Goal 1		1.1. Eradicating extreme poverty	1.3. Social protection for all	
Goal 2		2.1. Ending hunger (undernourishment)	2.2. Ending malnutrition (stunting) 2.5. Maintaining genetic diversity 2.a. Investment in agriculture*	2.2. Ending malnutrition (overweight)
Goal 3	3.2. Under 5 mortality 3.2. Neonatal mortality		3.1. Maternal mortality 3.4. Premature deaths from non-communicable diseases	
Goal 4	4.1 Enrolment in primary education	4.6 Literacy among youth and adults	4.2. Early childhood development 4.1 Enrolment in secondary education 4.3 Enrolment in tertiary education	
Goal 5			5.5. Women political participation	
Goal 6		6.2. Access to safe sanitation (open defecation practices)	6.1. Access to safely managed drinking water 6.2. Access to safely managed sanitation services	
Goal 7		7.1. Access to electricity	7.2. Share of renewable energy* 7.3. Energy intensity	
Goal 8			8.7. Use of child labour	
Goal 9		9.5. Enhancing scientific research (R&D expenditure)	9.5. Enhancing scientific research (number of researchers)	
Goal 10			10.c. Remittance costs	Inequality in income**
Goal 11			11.1. Urban population living in slums*	
Goal 12				12.2. Absolute material footprint, and DMC*
Goal 13				Global GHG emissions relative to Paris targets**
Goal 14				14.1. Continued deterioration of coastal waters* 14.4. Overfishing*
Goal 15				15.5. Biodiversity loss* 15.7. Wildlife poaching and trafficking
Goal 16			16.9 universal birth registration *	

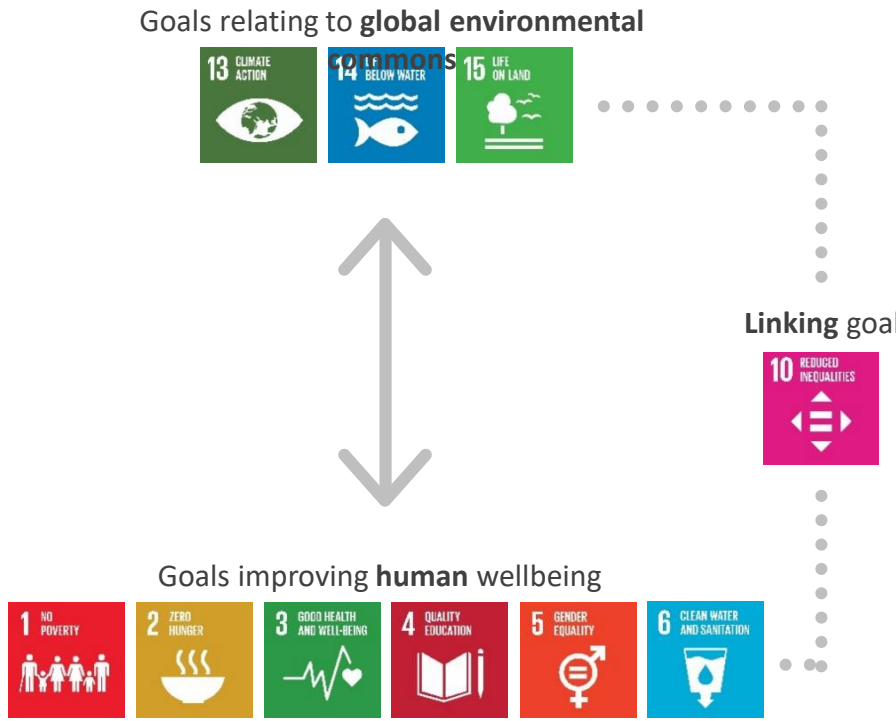
* target not specified ** based on most recently available data

Global Sustainable Development Report, 2019

SUSTAINABLE DEVELOPMENT GOALS

KØSCH

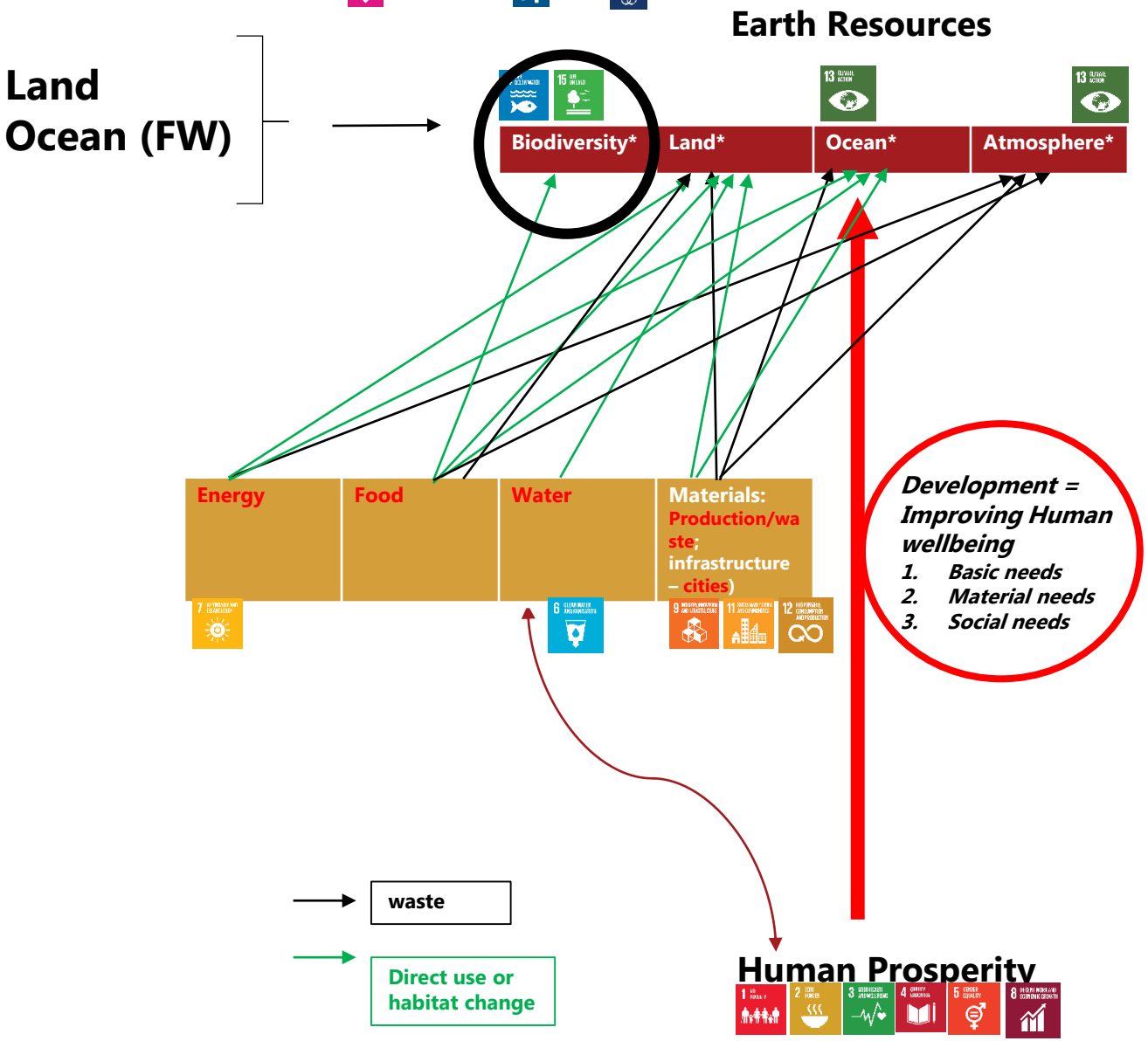
Interactions between the SDGs



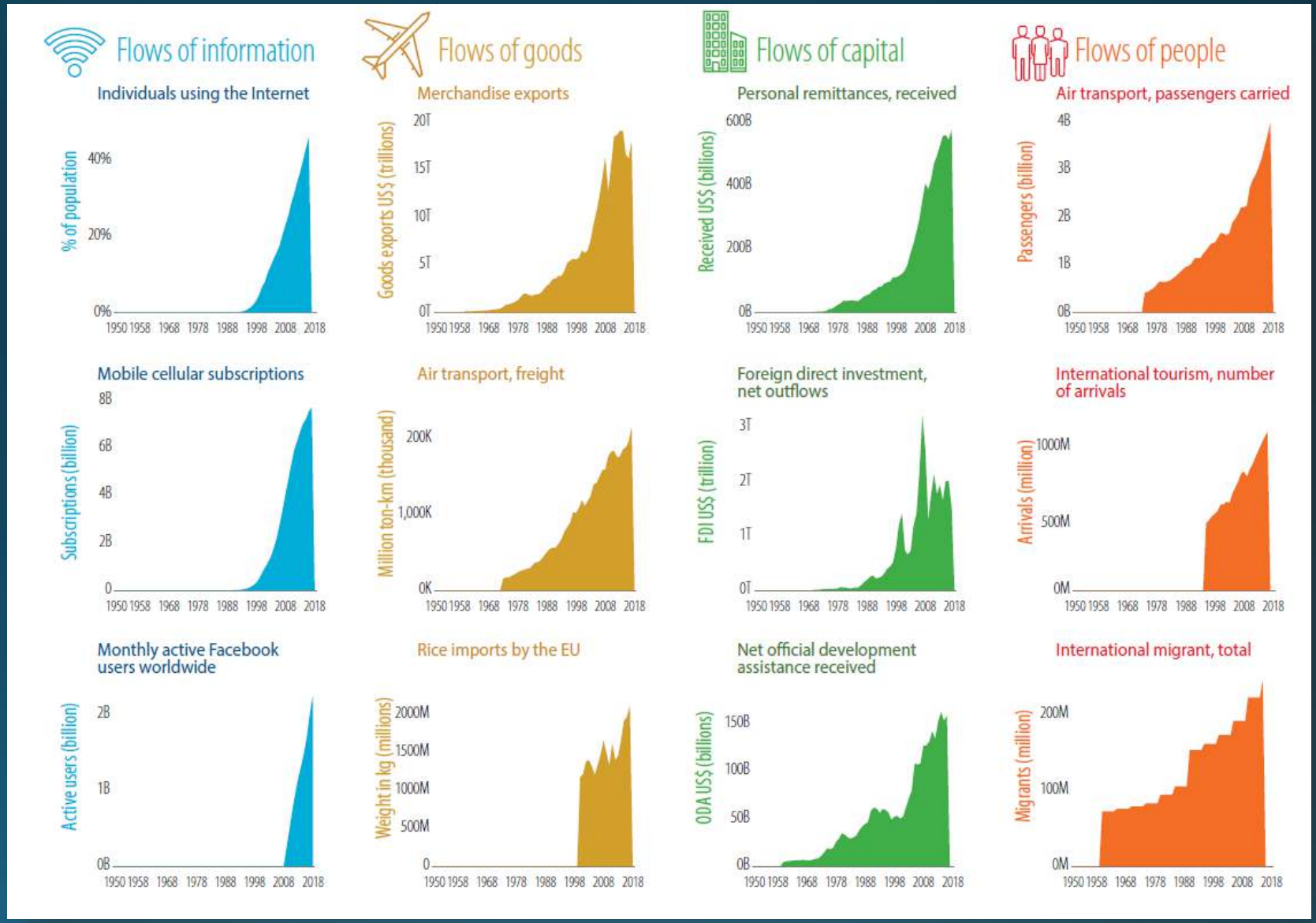
Model developed by Katherine Richardson, Professor, University of Copenhagen, 2019. Design by KØSCH

But we do not "think" in terms of SDGs!

The challenge of SD is giving all access to the finite resources necessary to allow continued development This requires and

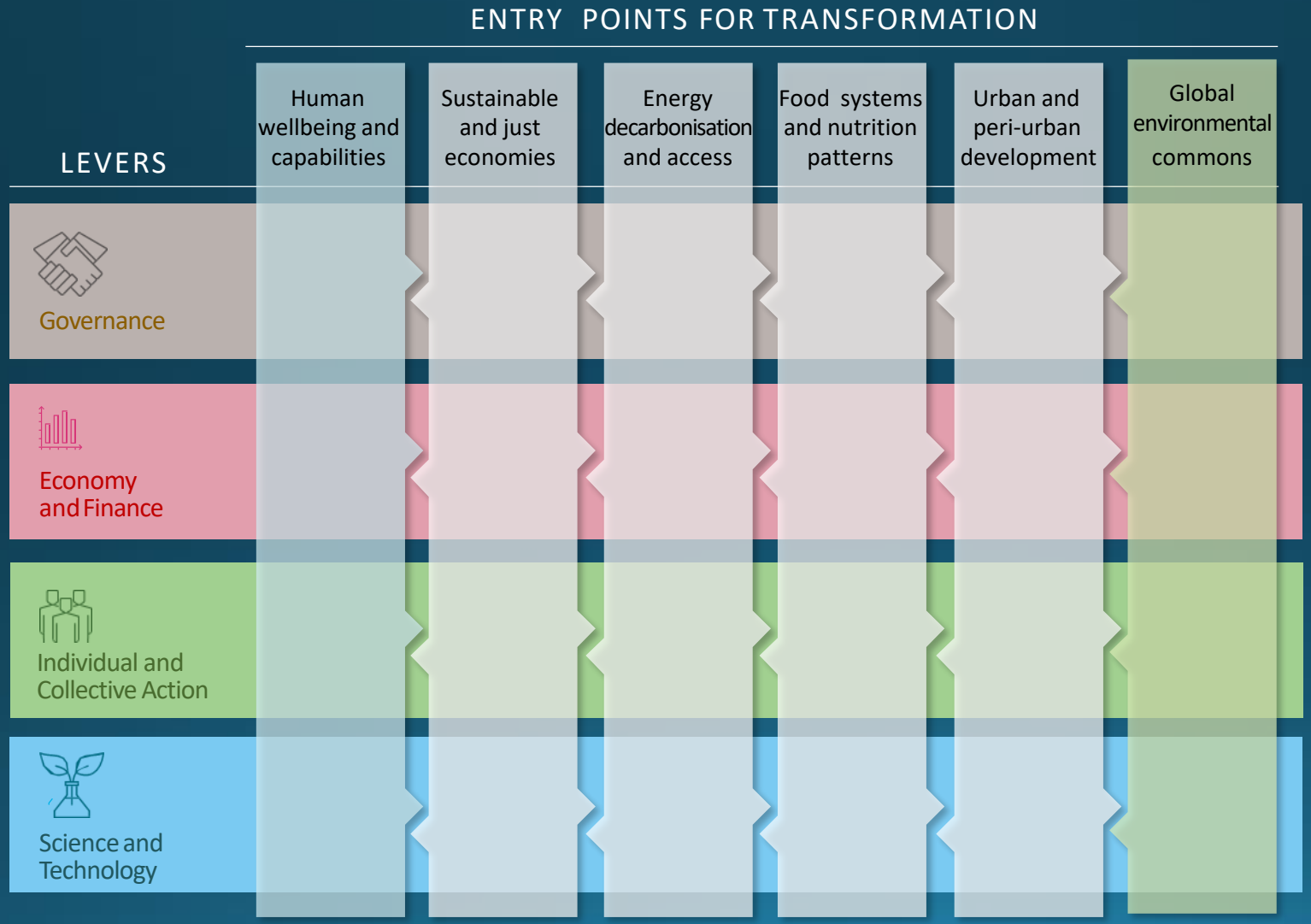


We live in a hyper-connected world



Knowledge-based transformation

Innovation through combined levers and new partnerships



All activities have both positive and negative interactions with SDGs!

From "sector" to "system" thinking!!

Sustainable development is all about finding the "sweet spot" where synergies are exploited while negative impacts are minimized!